# **Vulnerable Users**

## Background •

Traffic is a relatively broad term that encompasses more groups than just passenger cars and large trucks. Pedestrians, pedalcyclists, motorcyclists, and other alternative transportation mode users, all deemed "vulnerable users," are part of the everyday roadway environment and attention should be paid to their presence. Even though vulnerable users are legitimate roadway users, they are frequently overlooked in the quest to develop today's transportation systems, and understanding the associated traffic safety issues has proven difficult for engineers and planners.

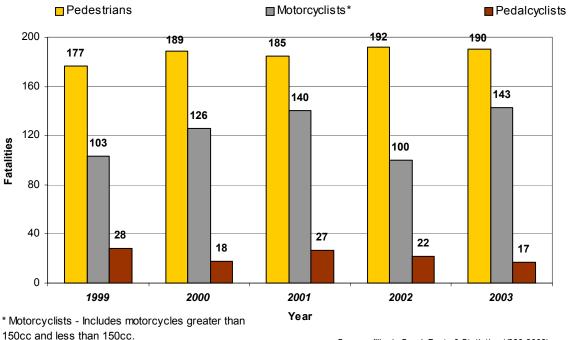


Figure 14. Illinois Vulnerable User Fatalities

Source: Illinois Crash Facts & Statistics (1999-2003)

In 2003, 190 pedestrians were killed and 5,889 were injured in Illinois traffic crashes. Over 95 percent of all reported pedestrian crashes occurred in urban areas. Although pedestrian crashes make up less than two percent of all traffic crashes, pedestrian fatalities account for over 13 percent of all Illinois traffic fatalities. Furthermore, approximately one-third of these killed pedestrians had been drinking.

From 2002 to 2003, motorcycle fatalities increased by 43 percent, totaling 143 motorcycle riders killed in 2003 or 9.8 percent of all traffic fatalities. In the same time period, registered motorcycles increased from 237,319 to 254,643. Furthermore, 4,376 motorcycle crashes occurred in 2003 and a total of 2,588 injuries were sustained.

Pedalcyclists were also involved in a large number of crashes in 2003. From 3,199 pedalcycle-vehicle crashes, 19 pedalcyclists were killed and 3,113 were injured. Specifically, riders under age 16 accounted for 11.8 percent of pedalcyclist fatalities and over 42 percent of the injuries. Refer to Figure 14.

### Recent Implemented Strategies

- Increased roadway safety enhancements:
  - Countdown pedestrian crosswalk signals
  - Enhanced roadway lighting
  - In-pavement lighting
- Implemented "Safe Routes to School" programs.
- Continued analysis and problem identification of motorcycle crash data.
- Continued implementation of IDOT's Highway Safety Plan initiatives:
  - Funded a motorcycle assessment to review program administration, personal protective equipment, rider education, licensing, and impaired riding
  - Funded a 50,000-copy reproduction of "Safe Bicycling in Chicago" in Spanish and English

#### Challenges ■

- Resistance to and lack of a mandatory motorcycle helmet law.
- Impaired pedestrians.
- Nighttime vulnerable user conspicuity.
- Limited pedestrian crash and exposure data.
- Lack of pedestrian advocacy groups.
- Lack of marked and lighted crossings and sidewalks.
- Incorporation of pedestrian facilities into all road projects.
- 50/50 state and local cost sharing.
- Local agency concern for exposure to liability.
- Capture of accurate crash data.
- Combination of contributing driver and vulnerable user factors.

#### Proposed Strategies

- Pursue legislation for a mandatory motorcycle helmet law.
- Promote programs to discourage drinking and motorcycling.
- Identify locations having disproportionately large numbers of vulnerable user crashes.
- Increase enforcement and education at identified high-crash zones.
- Increase lighting at high-crash locations.
- Improve pedestrian signing and pavement markings.
- Update existing and prepare new guidelines for pedestrian facilities at new construction and reconstruction projects.

- Increase state financial contributions for pedestrian facilities.
- Increase pedestrian and bicycle safety education programs in schools.
- Encourage communities to enact local mandatory bicycle helmet ordinances.
- Implement bicycle helmet distribution programs.
- Pursue further "Safe Routes to School" programs.
- Propose legislation, similar to California, to give pedestrians right-of-way.
- Participate in NCHRP "Lead City" program for pedestrian safety (Chicago Area Transportation Study (CATS) and Chicago Department of Transportation (CDOT)).
- Continue implementing and developing IDOT's Highway Safety Plan initiatives.
- Utilize NCHRP Report 500 Volume 10: A Guide for Reducing Collisions Involving Pedestrians.
- Investigate all recent implemented strategies for success.